

What is claimed is:

1. A pressure-sensitive adhesive composition comprising:

a) about 10 to about 40 wt. % of a styrene-isoprene block copolymer;

b) about 5 to about 30 wt. % of a styrene-butadiene block copolymer;

5 c) about 30 to about 65 wt. % of an aromatically modified tackifying resin; and,

d) about 8 to about 30 wt. % of a plasticizing oil.

2. The adhesive composition of claim 1 further comprising about 0.2 to about 2.0 wt. % of an antioxidant.

3. The adhesive composition of claim 2 wherein said antioxidant comprises a pre-
10 blended antioxidant in a resin carrier.

4. The adhesive composition of claim 1 wherein said styrene-isoprene block copolymer comprises from about 13 to about 27 wt. % of said composition.

5. The adhesive composition of claim 4 wherein said styrene-isoprene block copolymer comprises about 5 to about 80 % by weight styrene-isoprene diblock
15 component.

6. The adhesive composition of claim 4 wherein said styrene-isoprene block copolymer comprises about 40 to about 60 % by weight styrene-isoprene diblock component.

7. The adhesive composition of claim 1 wherein said styrene-butadiene block
20 copolymer comprises from about 8 to about 25 wt. % of said composition.

8. The adhesive composition of claim 7 wherein said styrene-butadiene block copolymer comprises from about 20 to about 35 wt. % bound styrene.

9. The adhesive composition of claim 8 wherein said styrene-butadiene block copolymer comprises from about 15 to about 20 wt. % block styrene.

10. The adhesive composition of claim 1 wherein said styrene-butadiene block copolymer comprises from about 10 to about 18 wt. % of said composition.
11. The adhesive composition of claim 10 wherein said styrene-butadiene block copolymer comprises from about 20 to about 35 wt. % bound styrene.
- 5 12. The adhesive composition of claim 11 wherein said styrene-butadiene block copolymer comprises from about 15 to about 20 wt. % block styrene.
13. The adhesive composition of claim 12 further comprising about 0.2 to about 2.0 wt. % of an antioxidant.
14. The adhesive composition of claim 1 wherein said aromatically modified 10 tackifying resin has a softening point above about 85 °C.
15. The adhesive composition of claim 14 wherein said aromatically modified tackifying resin comprises about 6 to about 35% by weight aromatic content.
16. The adhesive composition of claim 14 wherein said aromatically modified tackifying resin has a softening point above about 90 °C.
- 15 17. The adhesive composition of claim 1 wherein said aromatically modified tackifying resin comprises about 6 to about 35% by weight aromatic content.
18. The adhesive composition of claim 1 wherein said aromatically modified tackifying resin has a softening point above about 90 °C.
19. The adhesive composition of claim 1 wherein said aromatically modified 20 tackifying resin comprises about 40 to about 52 wt. % of said composition.
20. The adhesive composition of claim 19 wherein said aromatically modified tackifying resin comprises about 6 to about 35% by weight aromatic content.
21. The adhesive composition of claim 19 wherein said aromatically modified tackifying resin has a softening point above about 85 °C.

22. The adhesive composition of claim 21 further comprising about 0.2 to about 2.0 wt. % of an antioxidant.
23. The adhesive composition of claim 1 wherein said plasticizing oil comprises about 16 to about 22 wt. % of said composition.
- 5 24. The adhesive composition of claim 1 wherein said composition expresses a single glass transition temperature.
25. The adhesive composition of claim 1 wherein said adhesive composition has a tangent δ value of greater than 0.5 at all temperatures in the range of about -20 °C. to about 100 °C.
- 10 26. The adhesive composition of claim 1 wherein said composition has a composite midblock glass transition temperature of about 258 Kelvin to about 288 Kelvin.
27. The adhesive composition of claim 26 wherein said composition has a composite midblock glass transition temperature of about 263 Kelvin to about 283 Kelvin.
- 15 28. The adhesive composition of claim 26 wherein said composition has a composite midblock glass transition temperature of about 268 Kelvin to about 282 Kelvin.
29. The adhesive composition of claim 1 wherein said composition has a loop tack adhesion value to high density polyethylene greater than about 0.5 psi at 35 °F.
30. The adhesive composition of claim 1 wherein said composition has a loop tack adhesion value to high density polyethylene greater than about 2.5 psi at 70 °F.
- 20 31. The adhesive composition of claim 1 wherein said composition has a loop tack adhesion value to corrugated paperboard greater than about 0.3 psi at 35 °F.
32. The adhesive composition of claim 1 wherein said composition has a loop tack adhesion value to corrugated paperboard greater than about 1.5 psi at 70 °F.
33. A hot-melt pressure-sensitive adhesive composition comprising:

a) about 10 to about 40 wt. % of a styrene-isoprene block copolymer having about 5 to about 80% by weight styrene-isoprene diblock component;

b) about 5 to about 30 wt. % of a styrene-butadiene block copolymer having from about 20 to about 35 wt. % bound styrene and about 15 to about 20 wt. % block styrene;

5 c) about 30 to about 65 wt. % of an aromatically modified tackifying resin having between about 6 to about 35% aromatic content and a softening point above about 85 °C.; and

d) about 8 to about 30 wt. % of a plasticizing oil,

wherein said composition expresses a single glass transition temperature and has a

10 tangent δ value of greater than about 0.5 for all temperatures in the range of about -20 °C. to about 100 °C.

34. The adhesive composition according to claim 33 wherein said styrene-isoprene block copolymer comprises about 13 to about 27 wt. % of said composition.

35. The adhesive composition according to claim 33 wherein said styrene-isoprene block copolymer comprises about 14 to about 22 wt. % of said composition.

36. The adhesive composition according to claim 33 wherein said styrene-butadiene block copolymer comprises about 8 to about 25 wt. % of said composition.

37. The adhesive composition according to claim 33 wherein said styrene-butadiene block copolymer comprises about 10 to about 18 wt. % of said composition.

20 38. The adhesive composition according to claim 33 wherein said aromatically modified tackifying resin comprises about 40 to about 52 wt. % of said composition.

39. The adhesive composition according to claim 33 wherein said aromatically modified tackifying resin comprises about 45 to about 52 wt. % of said composition.

40. The adhesive composition according to claim 33 wherein said composition has a composite midblock glass transition temperature of about 258 Kelvin to about 288 Kelvin.

41. The adhesive composition according to claim 40 wherein said composition has a composite midblock glass transition temperature of about 263 Kelvin to about 283 Kelvin.

42. The adhesive composition according to claim 40 wherein said composition has a composite midblock glass transition temperature of about 268 Kelvin to about 282 Kelvin.

10 43. The adhesive composition according to claim 33 further comprising about 0.2 to about 2.0 wt. % of an antioxidant.

44. A pressure-sensitive adhesive construction comprising:

a) a face stock; and

b) a pressure-sensitive adhesive layer coated on at least one surface of said face stock, said pressure-sensitive adhesive comprising:

i) about 10 to about 40 wt. % of a styrene-isoprene block copolymer;

ii) about 5 to about 30 wt. % of a styrene-butadiene block copolymer;

15 iii) about 30 to about 65 wt. % of an aromatically modified tackifying resin; and,

20 iv) about 8 to about 30 wt. % of a plasticizing oil.

45. The pressure-sensitive adhesive construction of claim 44 further comprising a release layer in contact with said pressure-sensitive adhesive layer.

46. The pressure-sensitive adhesive construction of claim 44 wherein said styrene-isoprene block copolymer comprises about 40 to about 60% by weight styrene-isoprene diblock component.

47. The pressure-sensitive adhesive construction of claim 44 wherein said 5 aromatically modified tackifying resin has a softening point of greater than about 85 °C.

48. The pressure-sensitive adhesive construction of claim 44 wherein said aromatically modified tackifying resin has a softening point of greater than about 90 °C.

49. The pressure-sensitive adhesive construction of claim 44 wherein said 10 aromatically modified tackifying resin has between from about 6% to about 35% by weight aromatic content.

50 The pressure-sensitive adhesive construction of claim 44 wherein said pressure-sensitive adhesive comprises:

i) about 10 to about 40 wt. % of a styrene-isoprene block copolymer having about 5 to about 80% by weight styrene-isoprene diblock component;

15 ii) about 5 to about 30 wt. % of a styrene-butadiene block copolymer having from about 20 to about 35 wt. % bound styrene and about 15 to about 20 wt. % block styrene;

20 iii) about 30 to about 65 wt. % of an aromatically modified tackifying resin having between about 6 to about 35% aromatic content and a softening point above about 85 °C.;

iv) about 8 to about 30 wt. % of a plasticizing oil, and

v) about 0.2 to about 2.0 wt. % of an antioxidant,

25 wherein said pressure-sensitive adhesive expresses a single glass transition temperature and has a tangent δ value of greater than about 0.5 for all temperatures in the range of about -20 °C. to about 100 °C.

51. The pressure-sensitive adhesive construction of claim 50 further comprising a release layer in contact with said pressure-sensitive adhesive layer.

52. The pressure-sensitive adhesive construction of claim 50 wherein said styrene-isoprene block copolymer comprises about 40 to about 60% by weight styrene-isoprene diblock component.

53. The pressure-sensitive adhesive construction of claim 50 wherein said styrene-isoprene block copolymer comprises about 50 to about 58% by weight styrene-isoprene diblock component.

54. The pressure-sensitive adhesive construction of claim 50 wherein said aromatically modified tackifying resin has a softening point of greater than about 85 °C.

55. The pressure-sensitive adhesive construction of claim 50 wherein said aromatically modified tackifying resin has a softening point of greater than about 90 °C.